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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,712	01/18/2002	Donald R. Glynn	DWE/GLYNN2	6321

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EXAMINER

MENON, KRISHNAN S

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/050,712	Applicant(s) GLYNN, DONALD R.	
	Examiner Krishnan S Menon	Art Unit 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12 and 14-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-12 and 14-19 are pending. Claims 1-11 were withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12 and 14-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "limited collector space" and "predetermined limited quantity" in claim 12 are relative terms which render the claims indefinite. These terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falletti (US 4,865,742) in view of Kiderman et al (US 2003/0132175 A1)

Claim 12: Falletti teaches an apparatus having a cross flow filter module (2-fig 1) comprising a ceramic membrane coaxially mounted in a cylindrical housing (1, fig 2: coaxially mounted – see the central tube in fig 2 is coaxially mounted to the housing; see also col 2 lines 40-53 for ceramic materials) that permits substantially oil-free water (abstract), pumping means (7-fig 1) to circulate and to scour the membrane surface, permeate accumulation (24-fig 1) and drain means (26-fig 1) for disposal of permeate, so that in use, concentration of contaminated mixture is progressively increased (by recirculation- see fig 1; also this is intended use - A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)). Re the limited collector space of substantially minimal volume for permeate collection and receive a predetermined quantity of chemical cleaning solution, see fig1: the permeate collector space in Falletti is limited to the space in the shell between the tubes 1 (see also col 4 lines 26-31 which teaches high recovery of the permeate). The limitation, “to receive predetermined limited quantity of cleaning solution”, is functional language. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board’s finding of anticipation of claimed apparatus because the

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limitations at issue were found to be inherent in the prior art reference); see also *In re Swinehart*, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971); *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). “[A]pparatus claims cover what a device is, not what a device does.” *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990)

Instant claims add further limitations, which Falletti does not teach but Kiderman teaches, as follows: Claim 12: plurality of chemical cleaning solution storage tanks, electronic (solenoid) valve and manifold means for draining and back-flushing (Kiderman 86,102-fig 3; Para 0029). It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Kiderman in the teaching of Falletti for keeping the system clean and remove foulants as taught by Kiderman. With regard to the limitation, ‘chemical cleaning solution tanks’, this also is functional language – *In re Schreiber*.

Frequency of cleaning in claim 12 is part of the intended use (A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)) (Also see Kiderman col 5 lines 5-10)

Claim 16 adds the further limitations of a permeate accumulation means connected with compressed air for back-flushing, see Falletti – fig 1 and col 4 lines 13-25. Re the solenoid valves being normally closed, and biased open, see Kiderman para 0029. It would be obvious to one of ordinary skill in the art at the time of invention to

use the teaching of Kiderman in the teaching of Falletti to automate the Falletti system. Also please note: Broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art. (In re Venner, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958).

2. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falletti (US 4,865,742) in view of Kiderman et al (US 2003/0132175 A1) as applied to claim 12 above and further in view of Trulson et al (US 3,977,967)

Falletti teaches the module with a central tubular membrane (32 – at least one tube in the middle would be concentric with the shell), an outer housing (fig 1), end fittings (see fig 1) as in Claims 14.

Falletti in view of Kiderman does not teach the details of the end fittings with 'O-ring' seals as claimed in claims 14 and 15. Trulson teaches O-ring seals (fig 3) and gaskets (fig 5 and 6) in a membrane apparatus for cleaning wastewater. It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Trulson in the teaching of Falletti in view of Kiderman to have a compact design with tubes in close proximity to each-other and to the housing to save space (see col 10 line 56-col 11 line 2), and because Falletti does not teach the details of the end fittings. Re "two O-ring seals" in claim 15, Trulson does not specifically teach putting in two O-rings, but teaches the gasket in Fig 5 and 6, which would be equivalent to the two O-ring structure recited in claim 15, because it provides the same compact, close-proximity design. In this case, the prior art element performs the identical function specified in the

claim in substantially the same way, and produces substantially the same results as the corresponding element disclosed in the specification. *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000)

3. Claims 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falletti (US 3,977,967) in view of Kiderman (US 6,099,733) as in claim 12 above and further in view of Boulter (US 5,911,884).

Claims 17 and 19: computerized and control means: Kiderman figures, Para 0029: PLC controller. Falletti in view of Kiderman does not teach cabinet mounting. Boulter teaches cabinet mounting of a water treatment system (see figures and abstract). It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Boulter in the teaching of Falletti in view of Kiderman to mount the system in a cabinet for weather protection and/or for point of use installation. Also please note re computerized control means: Broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art. (In re Venner, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958).

4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Falletti (US 3,977,967) in view of Kiderman (US 6,099,733) and Boulter (US 5,911,884) as applied to claim 17 above and further in view of Haney (US 6,099,733).

Claim 18: two processing loops in back-to back relation and pivot means to enable reversal of modules for access for servicing: Haney teaches means for switching and sequencing operations for various forward and backward flows for operation and cleaning membranes in col 14 lines 46-67. It would be obvious to one of ordinary skill in the art at the time of invention to use the teachings of Haney in the teaching of Falletti in view of Kiderman and Boulter for effective cleaning of the membranes and automated operation of the system. Also please note: Broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art. (In re Venner, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958).

Response to Amendment

The declaration filed on 5/17/04 under 37 CFR 1.131 has been considered but is ineffective to overcome the references. This affidavit mainly contains arguments against the use of the Haney reference and Trulson as the primary ref, which are moot because of the change in rejection. Arguments are also mostly directed to the process, whereas the claims are for the apparatus. Subject matter in the numbered para 4 deals with details of engineering (close tolerances) and optimization (minimizing volume), which are not patentable. Comparison of the membrane data in Haney ref is not relevant in paragraph #5: Haney ref was used for its teaching of automation and back-flushing, not for the membrane. Arguments in para #7 re the aggressive chemical treatment of the ceramic membrane is not relevant – the invention claimed is not

process, but apparatus. Raising temperature in para #10: again, this is process; what is claimed is an apparatus. Spatial limitation in para #13: Trulson teaches such spatial limitations, especially with respect to the sealing means - see the rejection of claims 14 and 15. Para #14, re the Boulter ref: this reference is used to show that a water treatment unit which is cabinet mounted. The arguments that Boulter uses plastic membranes or is for city tap water are not relevant. Para #17: Trulson apparatus not physically compatible with Haney: the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Rest of the arguments in the declaration are already addressed in the rejection.

Response to Arguments

Applicant's arguments with respect to pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Krishnan Menon
Patent Examiner


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